

CLAIMS

1. A process for the production of conjugated linoleic acid, in which
 - 5 (a) conjugated linoleic acid lower alkyl esters are hydrolyzed with water in the presence of enzymes with continuous removal of alcohol,
 - (b) the hydrolyzate is separated into an organic phase and an aqueous/alcoholic phase and
 - (c) the organic phase containing the conjugated linoleic acid is freed from unreacted conjugated linoleic acid lower alkyl esters.
- 10 2. A process as claimed in claim 1, characterized in that conjugated linoleic acid lower alkyl esters corresponding to formula (I):
$$\text{R}^1\text{CO-OR}^2 \quad (\text{I})$$
- 15 where R^1CO is the acyl group of a linoleic acid containing conjugated double bonds and R^2 is a linear or branched alkyl group containing 1 to 4 carbon atoms,
are used.
- 20 3. A process as claimed in claims 1 and/or 2, characterized in that the hydrolysis is carried out with lipases and/or esterases in free or immobilized form.
4. A process as claimed in at least one of claims 1 to 3, characterized in that the hydrolysis is carried out with lipases and/or esterases selected
 - 25 from the group of microorganisms consisting of *Alcaligenes*., *Aspergillus niger*, *Candida antarctica A*, *Candida antarctica B*, *Candida cylindracea*, *Chromobacterium viscosum*, *Rhizomucor miehei*, *Penicillium camemberti*, *Penicillium roqueforti*, *Porcine pancreas*, *Pseudomonas cepacia*, *Pseudomonas fluorescens*, *Rhizopus javanicus*, *Rhizopus oryzae*,
 - 30 *Thermomyces lanuginosus*.

5. A process as claimed in at least one of claims 1 to 4, characterized in that the hydrolysis is carried out at temperatures in the range from 20 to 80°C.
6. A process as claimed in at least one of claims 1 to 5, characterized
5 in that the hydrolysis is carried out to a conversion of 60 to 100% by weight.
7. A process as claimed in at least one of claims 1 to 6, characterized in that a constant water content of 30 to 70% by weight is maintained in the reactor during the hydrolysis and an alcohol/water mixture is continuously removed by application of a vacuum of 20 to 60 ± 5 mbar.
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8. A process as claimed in at least one of claims 1 to 6, characterized in that a water content of 0 to 20% by weight is adjusted in the reactor during the hydrolysis and an alcohol/water mixture is continuously removed by application of a vacuum of 20 to 60 ± 5 mbar.
9. A process as claimed in at least one of claims 1 to 6, characterized
15 in that the hydrolysis is carried out in several stages without application of a vacuum, 50 to 75% by weight water being used in each stage.